



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,493	09/22/2003	Yun-Feng Chang	2003B099	2268

23455 7590 06/20/2005

EXXONMOBIL CHEMICAL COMPANY  
5200 BAYWAY DRIVE  
P.O. BOX 2149  
BAYTOWN, TX 77522-2149

EXAMINER

JOHNSON, CHRISTINA ANN

ART UNIT	PAPER NUMBER
----------	--------------

1725

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/668,493

Applicant(s)

CHANG ET AL.

Examiner

Christina Johnson

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 30-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/22/03; 6/1/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-29, drawn to a method of making a catalyst composition, classified in class 502, subclass 60+.
  - II. Claims 30-50, drawn to a process for making olefins, classified in class 585, subclass 640.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are difference methods with different functions, i.e. production of a catalyst as opposed to making olefins, with different method steps, and different effects.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and vice versa, restriction for examination purposes as indicated is proper.

Art Unit: 1725

5. During a telephone conversation with Mr. Frank Reid on June 14, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 30-50 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3-4, 7-10, 12, and 14-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Herbst et al.

Herbst et al. (US 5,051,164) discloses a catalyst composition and a method of preparing such a catalyst. With reference to the Examples, Herbst et al. teaches crystallizing ZSM-5 from a slurry comprising a silicon source, an aluminum source, and an organic templating agent (column 12, lines 40-60). The slurry is contacted with a flocculant and the zeolite crystals are recovered by filtration and dried (column 12, lines

Art Unit: 1725

60-65 and column 13, lines 1-5). It is taught that the ZSM-5 recovered in the presence of a flocculant is added to a slurry containing a binder/matrix material, spray dried, and calcined (columns 13-14, Examples 3 and 6).

With respect to the carbon content of the molecular sieve and the LOI of the molecular sieve, it is the position of the examiner that because the reference details the same method of preparation and the use of the same or similar starting materials, the product produced would inherently possess the same characteristics. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Herbst et al.

9. Claims 10-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Houser et al.

Houser et al. (US 3,902,993) discloses a means for separating crystalline zeolite from aqueous solutions containing the same (column 1, lines 40-55). Suitable zeolites include ZK-22, which is synthesized in the presence of a templating agent from sources of silicon, aluminum, and phosphorus (column 2, lines 40-55 and Example 3).

Art Unit: 1725

It is taught that the process entails the addition to the mixture of zeolite with aqueous salt solution or amorphous contaminant of a small amount of one or more reagents having the overall capability of functioning as a flocculant, collector and frother for the particles of zeolite and the introduction of a stream of air into the resulting composite to produce a foam or froth containing suspended particles of zeolite (column 2, lines 10-20). This foam is recovered and dried to obtain particles of zeolite (column 2, lines 15-20). The recovered zeolite is dried at a temperature between 80 and 200 degrees C (column 3, lines 55-60).

With respect to the carbon content of the molecular sieve and the LOI of the molecular sieve, it is the position of the examiner that because the reference details the same method of preparation and the use of the same or similar starting materials, the product produced would inherently possess the same characteristics. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Houser et al.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herbst et al. as applied above for claims 1, 3-4, 7-10, 12, and 14-29.

The teachings of Herbst et al. are as described above for claims 1, 3-4, 7-10, 12, and 14-29.

The difference between the reference and the claims is that the reference does not disclose wherein the amount of synthesized molecular sieve is greater than 250 Kg. However, one of ordinary skill would appreciate that a larger batch of zeolite would result in greater amounts of catalyst produced in one step. It would have been obvious to one having ordinary skill in the art to optimize the amount of zeolite produced in order to produce the catalyst most efficiently, in less time and with fewer steps.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Houser et al. as applied above for claims 10-12 and 14-16.

The teachings of Houser et al. are as described above for claims 10-12 and 14-16.

The difference between the reference and the claims is that the reference does not disclose wherein the amount of synthesized molecular sieve is greater than 250 Kg. However, one of ordinary skill would appreciate that a larger batch of zeolite would

Art Unit: 1725

result in greater amounts of catalyst produced in one step. It would have been obvious to one having ordinary skill in the art to optimize the amount of zeolite produced in order to produce the catalyst most efficiently, in less time and with fewer steps.

***Claim Rejections - 35 USC § 102/103***

13. Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wachter et al.

Wachter et al. (US 6,153,552) discloses a catalyst composition useful in hydrocarbon conversion processes. The catalyst composition comprises a molecular sieve component, a binder material, and a matrix material. Suitable molecular sieve materials include silicoaluminophosphates such as SAPO-11, SAPO-17, SAPO-18, SAPO-34, SAPO-44, and SAPO-56 (column 2, line 62 – column 3, line 5). The amount of molecular sieve in the finished catalyst is preferably from about 10 weight percent to about 80 weight percent (column 3, lines 15-20). Suitable binder materials include silica sol, alumina sol, and mixtures thereof (column 3, lines 20-45). The amount of binder material in the finished catalyst is preferably from about 10 weight percent to about 80 weight percent (column 4, lines 5-10). Suitable matrix materials include clays such as kaolin clay (column 4, lines 25-35). The amount of clay in the finished catalyst is preferably from about 20 weight percent to about 80 weight percent (column 4, lines 25-35). It is taught that a slurry of the catalyst components is formed followed by spray drying to produce catalyst particles (column 4, lines 35-65).

The limitation “providing a synthesized molecular sieve having been recovered in the presence of a flocculant” has been considered by the examiner as a product by



Art Unit: 1725

process limitation. In this case, the disclosed molecular sieve of Wachter et al. and the instantly claimed molecular sieve appear to be essentially the same, comprised of the same components, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims as opposed to the product taught by Wachter et al., such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

With respect to the carbon content of the molecular sieve and the LOI of the molecular sieve, it is the position of the examiner that because the reference details the use of the same or similar starting materials in the same or similar amounts, the product produced would inherently possess the same characteristics. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

Art Unit: 1725

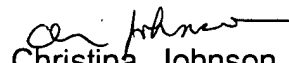
**Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Christina Johnson  
Patent Examiner  
Art Unit 1725  
6/15/05

CAJ  
June 15, 2005